

WO 01/03550

PCT/NZ00/00115

CLAIMS

1. A furniture item comprising at least a pair of members defining a dimension in one direction of said item, the members of said pair being connected together by adjustable connecting means. the arrangement and construction being such that said dimension in one direction 5 can be adjusted by means of said adjustable connecting means.

2. A furniture item as claimed in claim 1 further comprising at least a second pair of members defining a dimension in a second direction substantially perpendicular to said one direction, the members of said second pair being connected together by a second adjustable connecting means. the arrangement and construction being such that said dimension in said second 10 direction can be adjusted by means of said second adjustable connecting means.

*Claim 1*

3. A furniture item as claimed in claim 1 or claim 2 wherein the adjustable connecting means is any device or devices whereby the members can be located in a plurality of positions relative to each other.

4. A furniture item as claimed in claim 3 wherein there are linkage means connected between 15 members of the pair, the arrangement and construction being such that the members can be located relative to each other in a plurality of configurations.

*Claim 2*

5. A furniture item as claimed in claim 4 wherein the linkages can be arranged such that the width of the furniture can be set to a range of widths greater than two widths.

6. A furniture item as claimed in claim 4 or claim 5 wherein the linkages are claims.

20 7. A furniture item as claimed in any one of the preceding claims wherein the adjustable connecting means includes a sliding element fixedly connected relative to one of the members, and slidably engaged with an element fixedly connected relative to another of the members, the arrangement and construction being such that when the elements are slid relative to each other, the members are constrained to move relative to each other along a 25 substantially straight line.

WO 01/03550

PCT/NZ00/00115

*Sub 231*

8. A furniture item as claimed in claim 7 wherein the sliding element fixedly connected relative to one of the members is of any suitable section which can be engaged with a complementary surface formed on the other member.

9. A furniture item as claimed in claim 8 wherein the sliding element is an angle or channel, which engages with a pin or pins on the other member.

10. A furniture item as claimed in claim 8 wherein the sliding element is a cylindrically shaped member which slides inside an aperture or tube formed on the other member.

11. A furniture item as claimed in any one of the preceding claims wherein the adjustable connecting means also includes locking means for locking the elements or members relative to each other in a plurality of configurations.

12. A furniture item as claimed in claim 11 wherein the locking means includes clamping means which depend on frictional forces between adjacent surfaces.

13. A furniture item as claimed in claim 11 wherein the locking means includes fastening devices which positively locate the elements or members relative to each other.

15 14. A furniture item as claimed in any one of preceding claims wherein the members are fastened together at different locations relative to each other enabling variations in the dimension or dimensions of the furniture item.

20 15. A furniture item as claimed in any one of the preceding claims wherein the adjustable connecting means includes the use of other items in a room to provide location of the members relatively to each other.

16. A furniture item as claimed in any one of the preceding claims wherein the adjustable connecting means includes the use of locational forces provided by frictional forces between the furniture item and the floor.

25 17. A furniture item as claimed in any one of the preceding claims wherein the connecting means includes the use of pins or bolts which fit into apertures provided in a plurality of locations on the members or elements.

18. A furniture item as claimed in any one of the preceding claims wherein the connecting means includes the use of telescoping tubular members wherein a pin provided inside one tubular member is resiliently biased so as to spring out and engage in an aperture in another tubular member.
- 5 19. A furniture item as claimed in any one of the preceding claims wherein the connecting means includes the use of threaded members which may be tightened to clamp contacting surfaces of the elements or members together.
20. A furniture item as claimed in any one of the preceding claims wherein the connecting means includes the use of frictional "O" ring members to improve the locking effect.
- 10 21. A furniture item as claimed in claim 20 wherein the "O" ring is slidable along a tubular member which slides inside a larger diameter pipe having a flared inlet for accommodating the "O" ring, the arrangement being such that movement in one direction forces the O-ring tight against the outer surface of the tubular member and flared surface of the pipe thereby preventing relative movement in that direction.
- 15 22. A furniture item as claimed in claim 21 wherein the adjustable connecting means includes a Crox nut type coupling used with an "O" ring nipple, the "O" ring being clamped against the surface of the sliding tubular member on tightening of the coupling.
23. A furniture item as claimed in any one of the preceding claims constructed of metal or plastic tube.
- 20 24. A furniture item in the form of a bed with a frame constructed of metal or plastic tube and having adjustable connecting means involving telescoping portions of the metal or plastic tube with metal or plastic tube type couplings.
- 25 25. A furniture item in the form of a bed having angle or channel section structural members, and adjustable connecting means including elongate slots formed in sections of the members with threaded pins fixed to mating members, and fitted with wing nuts which may be tightened to clamp the members together at optional relative positions.

WO 01/03550

PCT/NZ00/00115

26. A furniture item in the form of a bed with wooden slats for mattress support, having adjustable connecting means involving flexible bands such as "O" rings which resiliently hold portions of the slats together while allowing relatively movement therebetween in a length wise direction of the slats.
- 5 27. A furniture item in the form of a book case having connecting means involving elongate slots formed in sections on one structural member of the book case and threaded pins fixed to the mating portions on another structural member of the book case and fitted with wing nuts which may be tightened to clamp the members together at optional relative positions.
- 10 28. A furniture item in the form of a mattress for an adjustable bed which may be constructed so that the size thereof can be changed to suit the adjusted size of the bed, the mattress design involving a modular construction so that sections may be added or removed as required.
29. A mattress as claimed in claim 28 wherein a mattress cover is provided which can accommodate the largest anticipated size of the mattress, and portions of the cover can be folded under the mattress when size of the mattress is reduced.
- 15 30. A furniture item as claimed in claim 29 wherein the mattress is a foam type mattress having interlocking sections formed on the edges of the mattress sections.
31. A mattress as claimed in claim 30 wherein the interlocking sections are protruding and recessed portions which are adapted to interlock together.
- 20 32. A mattress as claimed in claims 29 or 30 wherein the mattress has an adjustable cover which is used to cover any additional sections of the mattress, preventing slippage and any unevenness, thereby giving the overall appearance and feel of a traditional mattress.
33. A mattress as claimed in claim 32 wherein the mattress is a water mattress with compartments which can be filled as required to increase the size of the mattress.
- 25 34. A mattress as claimed in claim 31 wherein mattress is an air mattress, the size of which can be adjusted by inflating additional compartments.

35 A convertible furniture item including in combination, one or more tubular frame members adapted to be extensible in one or more directions, extensible post members adapted to be connected to and to support the frame members at various distances above floor level, the frame members further adapted to be connected to one or more conversion members adapted to convert one furniture item to a different furniture item, for example, a bed to a table, a dining table to a sofa or chair or a coffee table to a dining table or any combination thereof.

5 36. A convertible furniture item as claimed in claim 35 wherein the one or more frame members are adjustable by means of telescoping tubular members extensible to predetermined length intervals wherein they are held in position by one or more detent mechanisms.

10 37. A convertible furniture item as claimed in claim 36 wherin the detent mechanisms are spring loaded pins located in an inner telescoping tube member adapted to engage a corresponding hole or slot in an outer telescoping tube member for holding the telescoping tubes at a predetermined length.

15 38. A convertible furniture item as claimed in claim 36 wherein there are no detent mechanisms to hold the telescoping tubes in position but are held in position by the sheer weight of the frame member(s).

39. A convertible furniture item as claimed in any one of claims 36 to 38 wherein the conversion members include headboards, sideboards, interlocking slats or platform members adapted to convert one item of furniture into another.

20 40. A convertible furniture item as claimed in claim 39 wherein the conversion members are also extensibly adjustable to correspond to the extension of the frame member(s).

41. A convertible furniture item as claimed in any one of the preceding claims wherein there are accessory fittings adapted to be detachably fitted to the frame members or conversion members, for example, a pivoting reading lamp, a writing table, a tray or a support for a television set, video recorder or personal computer.

25 42. A furniture item substantially as herein described with reference to the accompanying illustrations.

WO 01/03550

PCT/NZ00/00115

43. A convertible furniture item substantially as herein described with reference to the accompanying illustrations.